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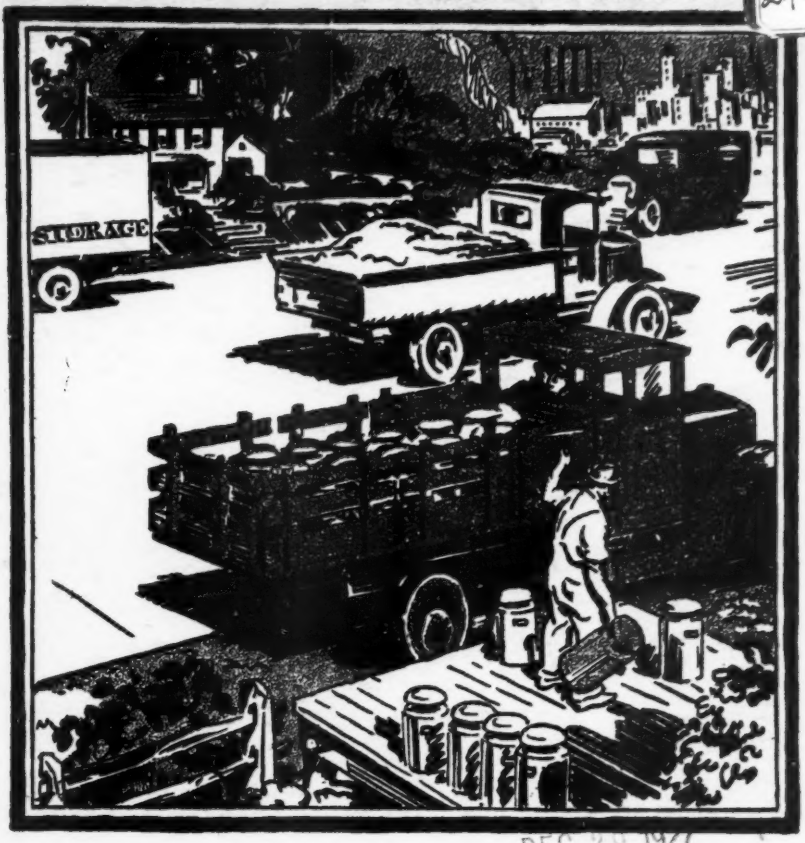


DEC 29 1927

TRUCK FACTS

for

1927

NATIONAL AUTOMOBILE CHAMBER OF COMMERCE

TRUCK FACTS FOR 1927

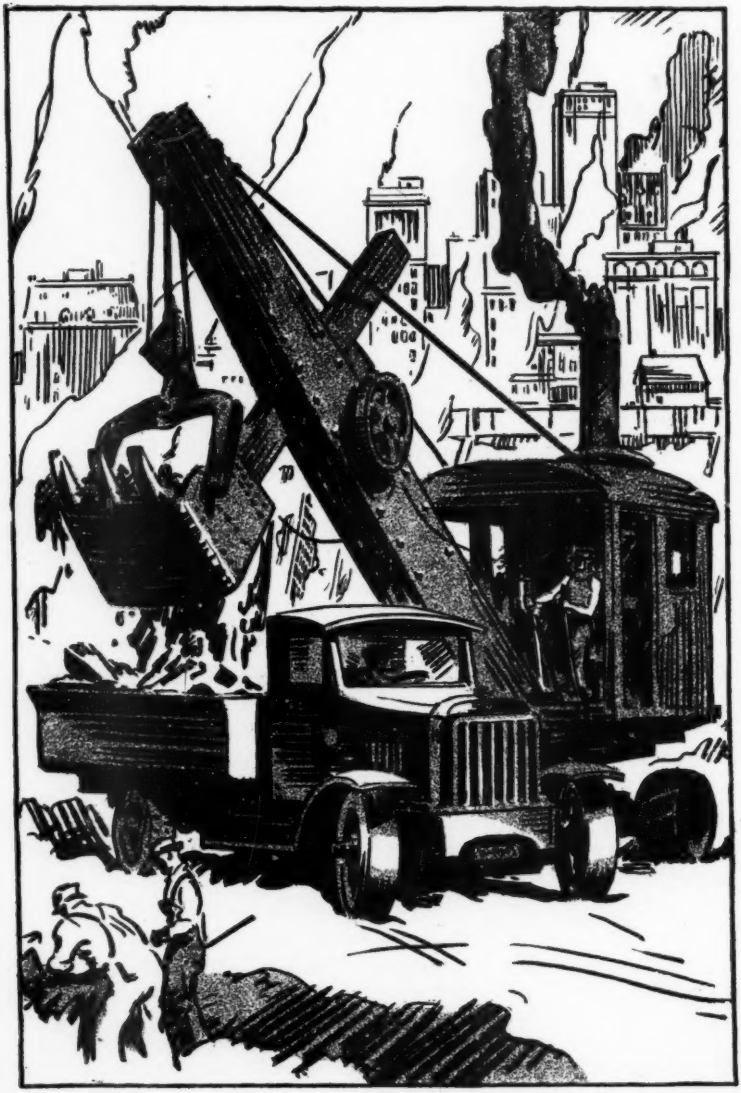
Preface

THIS booklet contains in concise form the facts on which rests the claim of the motor vehicle to a definite place in our scheme of transportation. The change from animal to mechanical power has been too abrupt for us to comprehend fully the important place the motor vehicle now occupies in the business and social life of the nation. The limited variety and utility of the animal-drawn vehicle compared with the wide range in type, power, speed and adaptability to each specific use of the modern motor vehicle give the key to its immediate acceptance on such a tremendous scale. The current estimates indicate a registration of motor vehicles of all types in 1927, amounting to more than twenty-three millions. In numbers the great majority are of the private passenger car type, but there is a large and growing use of the motor truck and motor bus.

This booklet presents in concise form the facts which have been painstakingly gathered for the more particular purpose of defining and limiting the fields of utility in which the motor bus and truck are principally engaged. Unlike other organized forms of transportation, analyses and reports of annual operations were not available. They have not been legally required. The motor bus and the motor truck have been finding their economic fields more surely and more completely because of the lack of legal restrictions and limiting regulations. This process of finding the exact dimensions of the field of economic usefulness has been a rapid one, quickly accomplished. Unprofitable operations have been discontinued, the profitable ones extended.

The physical restrictions of size and weight necessary for the protection of the highways have been generally adopted, and these are being perfected. Restrictions of utilization because of fear of competition should rest wholly upon demonstrated public necessity. That there is little real conflict of the bus and truck with other established forms of transportation is becoming increasingly apparent; and that, on the contrary, they are necessary complements of the other agencies is now established beyond question.

THOMAS H. MACDONALD, *Chief,*
United States Bureau of Public Roads.



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Sources of Material:

Except where otherwise noted, the truck traffic figures given herewith are from surveys conducted by the U. S. Bureau of Public Roads in California in 1922; in Connecticut in 1922-23; in Pennsylvania in 1923-24; Cook County, Illinois, and Maine in 1924; Ohio in 1925, and New Hampshire in 1926.

Table of Contents *(continued)*

Considerable data has been taken from studies of the Bureau of Agricultural Economics, made in conjunction with State Agriculture Experiment Stations, or similar groups. These references are taken from the following bulletins:

City	Bulletin	Date	Cooperating Body
Altoona, Pa.	184	Jan., 1924	Agriculture Experiment Station, Penn. State College.
	427	May, 1924	Cornell Agricultural Experiment Station.
	188	Oct., 1924	Agricultural Experiment Station, West Virginia University.
	240	Mar., 1925	Virginia Agricultural Experiment Station, Agric. Exper. Station.
	217	May, 1925	Agric. Exper. Station, University of New Hampshire.
	295	June, 1925	Agric. Experiment Station, Purdue University.
	416	July, 1925	New Jersey Agricultural Experiment Station.
Agric. situation in New Orleans		Jan., 1926	New Orleans Chamber of Commerce.
	222	June, 1926	University of New Hampshire.
Extension Circular	89 part 5	June, 1926	Louisiana State University.

Additional material comes from the public hearings held by the Interstate Commerce Commission on the subject of motor bus and motor truck operation, which were held at the following times and places:

Chicago	July, 1926
St. Paul	July, 1926
Portland, Oregon	August, 1926
San Francisco, California	August, 1926
Los Angeles, California	August, 1926
Denver, Colorado	August, 1926
Detroit, Michigan	September, 1926
Boston, Massachusetts	September, 1926
New York City	September, 1926
Asheville, North Carolina	September, 1926
Dallas, Texas	September, 1926
Kansas City, Missouri	September, 1926
Washington, D. C	September, 1926

Where reference is made to evidence presented before the Interstate Commerce Commission hearing in one of the above places, the hearings herewith referred to are the ones indicated.

Other material comes from the National Automobile Chamber of Commerce, but where material comes from similar authoritative but unofficial sources, note to that effect is made.

I. Summary

Registration and Ownership.

Motor trucks are approximately 12% of all motor vehicles.
Twenty per cent of all trucks are on farms.
Ninety per cent of all trucks are owner-operated.

Length of Haul.

From 61% to 81% of all motor truck trips are less than 30 miles, according to traffic studies made by the U. S. Bureau of Public Roads in California, Connecticut, Ohio, Pennsylvania and Cook County, Illinois.

In the same area but from 5% to 19% of all motor truck trips are more than 60 miles.

The average trip mileage of loaded trucks ranges from 23 miles in Connecticut to 31 miles in California.

Commodities Carried.

The major part of motor truck tonnage is a direct distribution of commodities to their final use. In Cook County, Illinois, 70% of the truck tonnage was of this type.

Products of manufacture constitute the chief volume of truck tonnage, amounting to 69% of the total in Connecticut and 55.9% in Ohio.

From 20% to 98% of the milk supply of nine cities is carried by truck.

Types of Vehicle Used.

From 77% to 86% of all loaded trucks on the highways in Maine, Pennsylvania, Connecticut and Cook County, Illinois, are of 2½ ton capacity or less.

Extent of Interstate Operation.

Foreign motor trucks in Ohio were 4.7% of all truck traffic; in Pennsylvania 4.4% and in Connecticut 10.9%.

Farm Use of Motor Trucks.

Sixty per cent of the 45,000 farmers who are members of the Michigan Farm Bureau Federation own and operate their own trucks.

Summary *(continued)*

Twelve hundred farmers' vehicles bring produce to the New Orleans city market.

Farm trucks in Ohio represented 15.5% of the total daily truck mileage.

The farm truck provides a feeder service to the railroads.

Extent of Operating-For-Hire.

Trucks operated for hire (both common carrier and contract carrier) constitute but 8.7% of the trucks in Maine, 13.8% in Pennsylvania, 17% in Cook County, Illinois, 21% in Ohio, 17.3% in New Hampshire and 25% in Connecticut.

Common carrier trucks hauled but 6% of the total highway tonnage moved in Connecticut, 6% in Pennsylvania, 10% in Ohio, 13% in New Hampshire, on an average, but from 6% to 8% of all tonnage on the highways is moved by common carriers.

Interstate common carrier trucks handle but about 1% to 2% of the total tonnage hauled.

Truck Use of the Highway.

Truck traffic on an average day ranges from 5.6% of the total traffic in Cook County, Illinois, 10% in Maine, to 22% on week-days in New Jersey and 26% on week-days in Connecticut.

In Ohio, 54.1% of the truck mileage was on the state system, 31.8% on the county system and 14.1% on the township highways. Total truck mileage on all highways was 10.2% of total vehicle miles.

Taxation.

Motor trucks in 33 states in 1926 constituted 11% of the total vehicles registered and paid nearly 23% of the registration fees. An even larger percentage of the gasoline taxes were paid by trucks, due to heavier per mile consumption.

Special taxes assessed against the common carrier truck average $70.77 per year per ton of capacity, in excess of special taxes assessed against owner-operated vehicle.

Influence on Other Carriers.

Seventy per cent of the shippers studied in the Chicago area reported no change made from rail to truck in L. C. L.

Summary *(continued)*

haulage beyond 15 mile zone. Eighty-two per cent reported no change in carload haulage beyond 15 mile zone.

Within a 20 mile zone of Columbus, Ohio, 84.5% of all tonnage is moved by motor truck.

Of all the loaded trucks recorded on Cook County highways 56.3% originated at retail or wholesale establishments or at consumers. With few exceptions the goods carried were immediate consumption commodities.

Forty-six railroads are now using motor trucks in terminal operations; 15 for store door delivery and 11 to replace local freight trains.

Legal Aspects of Interstate Motor Regulation.

Two decisions of the Supreme Court have laid down the principle that the state cannot regulate vehicles moving in interstate commerce in the absence of specific Congressional authority.

Two later decisions deny the right of the state to impose common carrier regulations upon private carriers by legislative fiat.

The Supreme Court of the United States, in Morris vs. Duby, upheld the right of the State Highway Commission of Oregon to prescribe reasonable load limitations for all vehicles.

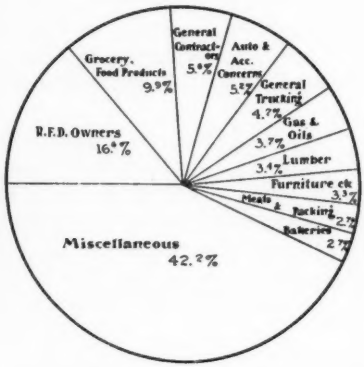
In Clark vs. Poor, the Supreme Court upheld the right of the State Public Service Commission of Ohio to regulate motor truck common carriers, in the interest of safety and convenience and to insure the conservation of the highways, even if such carrier is engaged exclusively in interstate commerce.

II. Registration and Ownership Statistics

Year	Production	Wholesale Value	Registration
1904	411	*$946,947	410
1905	450		600
1906	500		1,100
1907	700		1,700
1908	1,500		3,100
1909	3,255	*5,230,023	6,050
1910	6,000	20,485,500	10,000
1911	10,691	21,000,000	20,000
1912	22,000	43,000,000	41,400
1913	23,500	44,000,000	63,800
1914	23,373	*45,098,464	85,600
1915	74,000	125,800,000	136,000
1916	92,130	161,000,000	215,000
1917	128,157	220,982,668	326,000
1918	227,250	434,168,992	525,000
1919	275,943	423,326,621	794,372
1920	321,789	423,249,410	1,006,082
1921	†146,082	†164,858,550	1,118,520
1922	†249,228	†220,119,667	1,375,725
1923	†385,755	†305,999,606	1,612,569
1924	†363,530	†307,211,344	2,134,724
1925	†473,154	†433,744,079	2,441,709
1926	†491,353	†433,371,169	2,764,222

†Includes Canadian production.
*From U. S. Census Reports.

Motor Vehicles in Use in U.S.



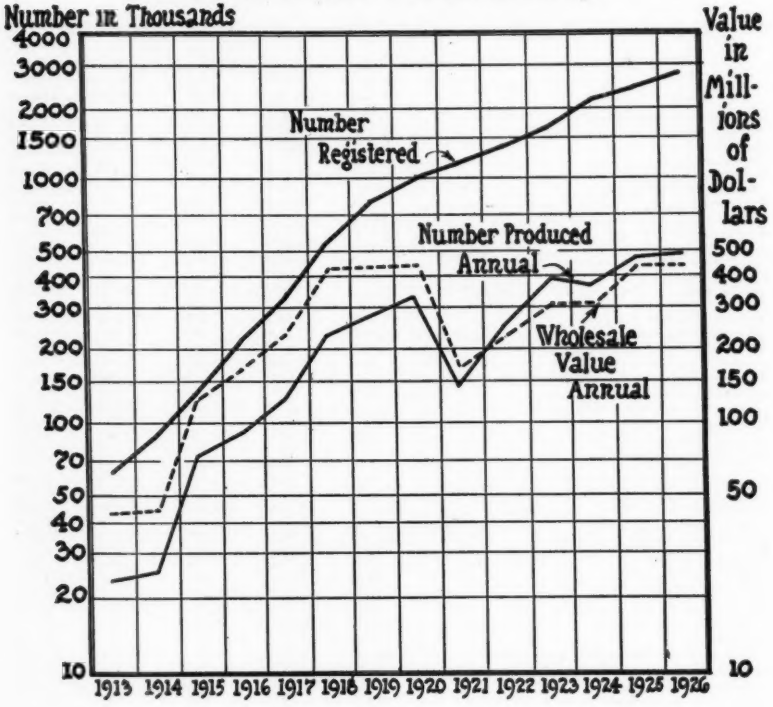
C. INDUSTRIAL USE OF MOTOR TRUCKS

Table Covers Distribution of 1,321,130 *out of* 2,441,709 *Registered*†

	Under 1 ton	All Trucks 1 ton and over	All Trucks Over 1 ton	All Trucks 2½ ton and over	Total* all Trucks
Agricultural machinery and implements	831	2,625	892	427	5,583
Autos, accessories and supplies	13,867	31,806	9,779	4,243	69,198
Bakeries	9,970	16,221	5,804	1,398	35,419
Bottlers	1,591	10,143	5,184	1,982	15,612
Building material and supplies	2,323	11,951	5,783	3,413	18,544
Cigars and tobacco	1,650	2,707	758	309	6,018
Clothing—men's and women's	979	2,596	818	316	4,823
Dry goods	1,981	4,973	2,211	779	8,894
Department stores	1,610	3,639	2,290	856	6,575
Coal, coke and ice	1,203	10,700	4,366	1,951	16,093
Coal and fuels exclusively	1,745	19,920	11,808	6,699	29,557
Confectioners	2,798	6,960	2,327	959	13,179
Creameries, dairies and ice cream manufac'rs	5,654	19,333	8,567	4,416	33,509
Drugs, chemicals and drug sundries	1,747	6,097	2,686	1,445	10,150
Electrical contractors	1,036	1,987	279	103	4,109
Electrical machinery and contractors' supplies	2,169	3,335	799	285	7,165
Flour and feed mills and grain elevators	1,050	6,313	2,524	1,023	10,517
Florists	2,652	4,328	883	235	9,563
Furniture and home furnishings	6,664	18,575	5,738	1,933	33,525
General merchandise	8,250	23,766	3,213	948	43,736
Groceries and other food products	31,040	67,734	18,715	7,220	130,690
Hardware	6,469	16,591	4,582	1,733	31,770
Hay, grain and feed	752	3,367	1,192	525	5,747
Household appliances	310	682	184	81	1,283
Jewelry	261	735	227	84	1,370
Leather goods and luggage	357	1,328	525	233	2,194
Lumber, logging and mill work	3,363	29,841	15,220	7,860	45,072
Machinery and tools	1,802	6,428	2,696	1,392	10,899
Meats and other packing house products	7,043	18,959	6,449	2,671	35,432
Metals and metal products	2,581	11,995	5,577	3,231	18,553
Mines and quarries	669	4,351	2,377	1,631	6,978
Novelties and toys	856	2,469	845	293	4,783
Office and store equipment	558	1,775	777	390	3,238
Oils and gasoline	4,104	31,957	19,227	10,248	49,008
Paper and paper products	599	3,513	2,194	1,182	5,490
Plumbing and heating	7,529	13,657	2,670	1,083	23,474
Printers	749	1,715	606	247	2,477
Produce and commission merchants	2,610	11,687	4,073	1,481	19,108
Publishers	659	1,621	613	234	3,273
Rubber products exclusively	385	1,101	536	295	1,772
Shoes	345	1,291	393	162	2,145
Textiles	622	4,038	1,733	726	6,160
Banks	206	582	203	75	1,320
Contractors, general	12,893	40,842	13,111	7,302	74,141
Contractors, road	324	3,219	1,634	1,166	4,657
General trucking	4,407	42,273	29,436	18,739	62,542
Hospitals and public institutions	307	830	234	61	1,525
Hotels, clubs, caterers and restaurants	1,972	5,052	1,274	441	9,770
Laundries and cleaners	9,875	14,759	2,215	584	31,959
Schools	551	2,015	508	104	3,739
Undertakers	1,806	5,597	1,711	121	10,162
Warehouses	327	3,555	2,403	1,517	4,887
R. F. D. Owners	48,256	119,836	16,592	5,119	219,539
Real estate	868	2,600	692	315	5,568
Municipal, county and state	3,858	20,892	12,029	6,081	30,955
Federal—Post Office Department	391	922	413	220	2,158
Federal—Army and other	441	313	200	130	18,826
Electric railways	279	854	502	269	1,383
Gas, electric and water utilities	4,084	11,329	5,218	2,364	20,520
Railroads and steamships	592	5,659	3,562	2,134	8,052
Telephone and telegraph	2,636	5,406	1,559	646	10,721
	237,496	731,366	261,619	124,119	1,321,230

*Including those with capacity undetermined.
†Survey as of January 1, 1926.

Growth of Motor Truck Industry

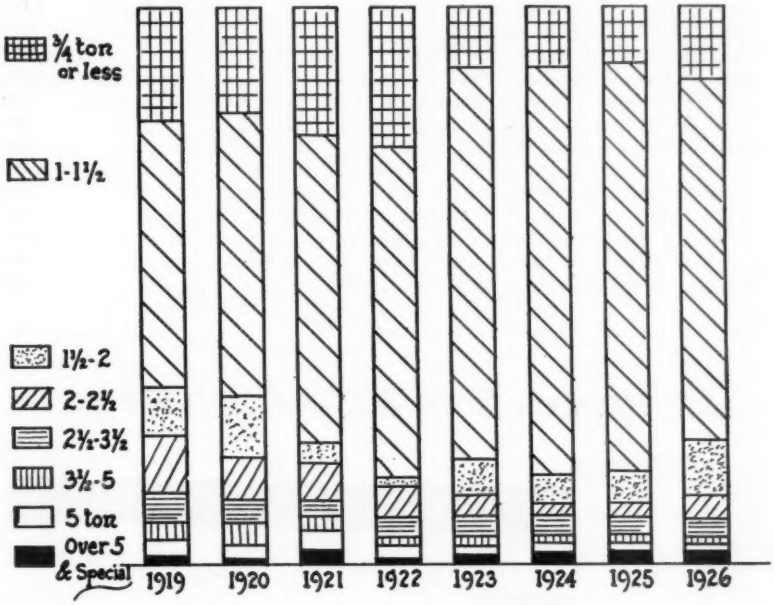


D. 470 Operators Own 876 Trucks.

At the Dallas hearing before the Interstate Commerce Commission, the results of an investigation in 1925 by the Texas Railroad Commission were presented, which revealed 470 operators using 876 trucks, as follows:

1 truck	275
2 trucks	115
3 trucks	39
4 trucks	22
5 trucks	8
6 trucks	6
8 trucks	1
10 trucks	10
11 trucks	1
21 trucks	1

Truck Production by Capacities



E. Number of Truck Fleets in United States.

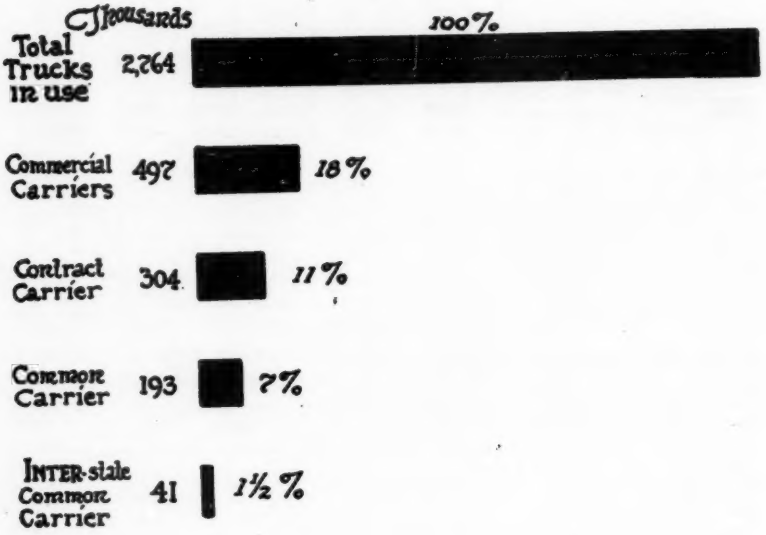
Fleets of 2 or more	278,809
3 or more	98,761
5 or more	33,270
10 or more	9,663
Total Fleets	**278,809**

F. Leading Truck Fleets in United States.

American Railway Express, New York City (includes all branches)	6,049
Post Office Department, Washington, D. C.	5,707
Associated Bell Telephone Companies	5,000
Standard Oil Company of Indiana, Chicago, Illinois	3,385
Armour & Co., Chicago, Illinois	3,374
Ward Baking Company, New York City	2,139
Gulf Refining Company	2,005
Street Cleaning Department, Brooklyn, New York	1,800
Texas Company, New York City	1,774
Swift & Co., Chicago, Illinois	1,500
Pennsylvania Department of Highways, Harrisburg, Pennsylvania	1,271

Standard Oil Company of New York, Boston, Massachusetts	1,230
Department of Street Cleaning, New York City	1,200
City of Los Angeles Engineering Department, Los Angeles, California	1,145
Union Oil Company of California, Hemet, California	1,071
Shell Company of California, Martinez, California	1,014
General Baking Company, New York City	1,007
Sinclair Refining Company, New York City	950
Tidal Oil Company, Tulsa, Oklahoma	876
State of Tennessee, Department of Highways, Nashville, Tennessee	859
Atlantic Refining Company, Philadelphia, Pennsylvania	815
State Highway Department, Central Div. Maintenance, Columbia, S. C.	800
Indian Refining Company, Laurenceville, Illinois	800
New York Fire Department, New York City	800
California Highway Commission, Sacramento, California	800
Continental Oil Company, Denver, Colorado	800

Shippers Own 82% of Trucks



III. General Field of Truck Operation

LENGTH OF HAUL

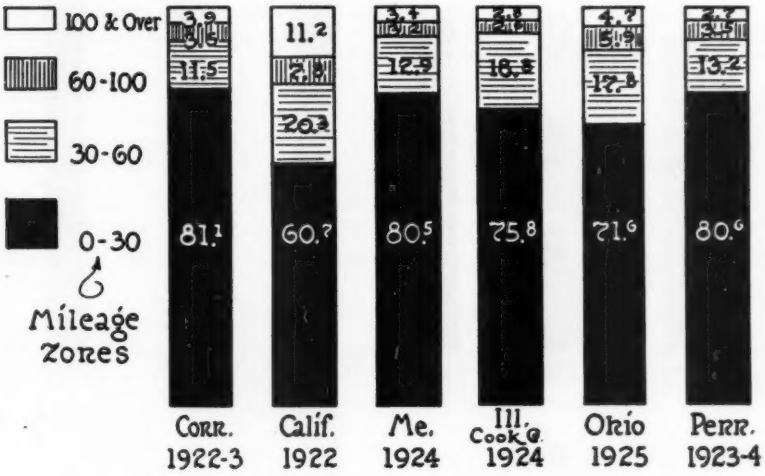
Short Haul Trucking Predominates.

The major part of the tonnage transported by motor trucks move less than 30 miles. Figures from surveys by the U. S. Bureau of Public Roads show the following:

Area	Less than 30 miles		More than 60 miles		More than 100 miles	
	% trucks	% net tonnage	% trucks	% net tonnage	% trucks	% net tonnage
California	60.7	58.1	19.0	21.2	11.2	13.5
Ohio	71.6	64.2	10.6	15.9	4.7	7.6
Cook County, Ill.	75.8	*	5.4	*	2.8	*
Pennsylvania	80.6	77.3	6.2	6.9	2.7	3.3
Connecticut	81.1	67.1	7.4	15.2	3.9	8.6

*Not available.

Trucks Operate Chiefly in Short Haul Field.



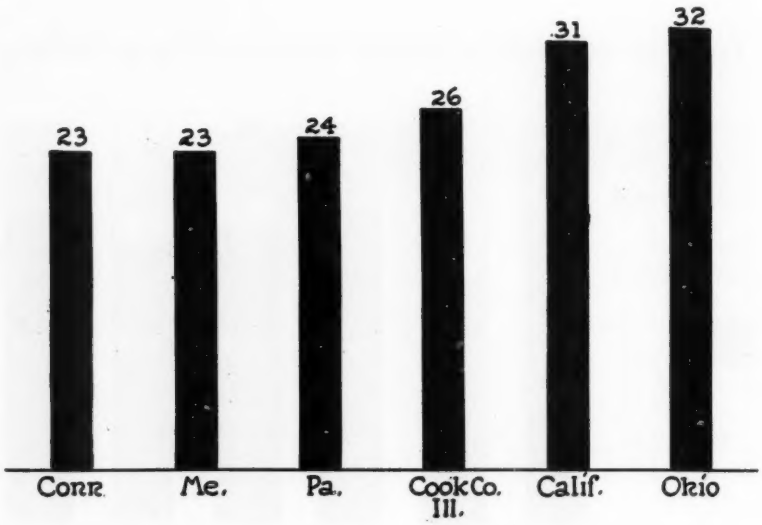
It will be noted that the long haul is a decidedly minor part of the total. It generally depends upon some specific characteristic of the commodity shipped, such as household goods, perishables, etc.

Average Trip Mileage of Loaded Trucks is Low.

The figures from six areas give remarkably similar results as to the average trip mileage of loaded trucks, the figures being as follows:

Connecticut, Maine	23 miles
Pennsylvania	24 miles
Cook County, Illinois	26 miles
California	31 miles
Ohio	32 miles

Average Trip Mileage of Loaded Trucks



Long Haul Unprofitable.

Analysis of available operating cost records of commercial haulers indicates that the short haul, 45 miles or less, is profitable, while the long haul is generally unprofitable.

(NOTE—See also types of vehicles used for data on average trip mileage of loaded trucks by capacity in Cook County, Illinois.)

COMMODITIES CARRIED

Direct Distribution Main Truck Function.

The direct distribution of commodities to their ultimate use constitutes the main function of the motor truck. In Cook County, Illinois, it was found that 70% of the truck tonnage was a direct distribution of commodities to their final use. These goods were divided into:

Consumption goods	43.5%
Materials for construction and repair	20.8%
Goods to farms	5.5%
	69.8%

Foodstuffs Dominate Truck Tonnage.

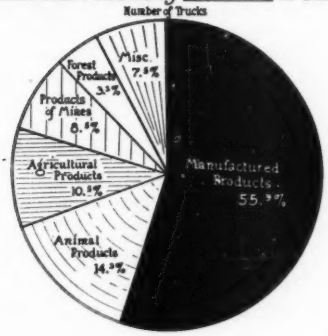
In Connecticut, approximately 40% of the total truck tonnage consisted of foodstuffs.

The following table indicates the larger groups of commodities handled by truck on the Connecticut highway system (1922-23):

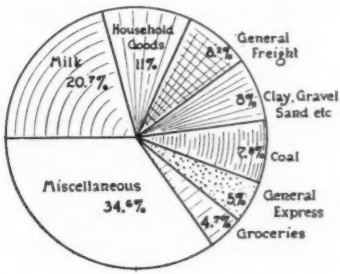
Commodities Moved by Truck on Connecticut System Diversified.

Commodity	Percentage of total net tonnage	Commodity	Percentage of total net tonnage
Groceries	6.8%	Textiles	2.2%
Gravel, sand, crushed rock	5.3%	Ice cream	2.0%
General express	4.8%	Iron and steel bar	1.8%
Gasoline	4.5%	Brick	1.5%
Household goods (used)	4.5%	Feed and grain	1.5%
Coal	3.3%	Furniture (new)	1.4%
Lumber	3.3%	Vegetables	1.3%
Bread and bakery goods	3.0%	Paper	1.2%
Meat, fresh	2.9%	Wire	1.1%
Milk, fresh	2.7%	Ice	1.0%
Fruits	2.4%	Tires and rubber	1.0%
Brass, copper, lead	2.4%	Wood, cord and kindling	.9%
Beverages	2.4%	Miscellaneous commodities	34.4%
		Total	100.0%

Commodities Hauled by All Trucks in Ohio



Commodities Hauled by Hired Trucks in Ohio



Products of Manufacture Major Part of Truck Tonnage in Ohio.

The products of manufacture use by far the greatest number of trucks on Ohio highways and represent the heaviest percentage of total tonnage moved by truck. The figures are:

Commodity Class	Loaded Trucks per cent	Net Tons* per cent	Average length of haul Miles
Products of manufacture	55.9	44.6	36
Products of animals	14.3	12.7	28
Products of agriculture	10.5	9.2	27
Products of mines	8.5	16.9	8
Products of forests	3.3	4.4	20
Miscellaneous	7.5	10.2	48
Total	100.0	100.0	32

*Includes net tonnage hauled by trailers.

Trucks Handle Large Share City Milk Supply.

In 1924, the Department of Agriculture found many cities receiving almost their entire daily supply of milk by truck as follows:

St. Paul and Minneapolis	98%
Milwaukee	98%
Cincinnati	97%
Indianapolis	96%
Detroit	89%
Baltimore	45%
Chicago	32%
Philadelphia	20%

Hogs Shipped by Truck in Short Haul Area.

Ninety per cent of the hogs received at the Indianapolis stockyards from within a 50 mile radius were shipped by truck. Forty-two per cent of the total in 1926 were so received.

Year	Total Receipts	Truck Receipts	% of Total
1913	1,994,624	90,821	4.55
1914	2,099,787	96,591	4.60
1915	2,435,319	136,447	5.60
1916	2,576,611	173,191	6.72
1917	2,350,730	271,994	11.57
1918	2,749,976	462,313	16.81
1919	2,936,493	711,212	24.21
1920	2,896,894	791,988	27.33
1921	2,694,705	808,595	30.00
1922	2,266,551	734,280	32.39
1923	2,875,648	934,960	32.54
1924	2,864,850	922,904	32.20
1925	2,066,703	768,628	37.21
1926	1,771,329	745,505	42.11

City Milk Supply Hauled by Motor Trucks

Percent Transported to each city

It will be noted that truck receipts have remained practically constant since 1920-21, with the exception of 1924, and that the increase of percentage brought in by trucks results more from a decrease in the total receipts than in an actual increase in the total of hogs trucked in.

Livestock Received by Truck at St. Paul Stockyards.

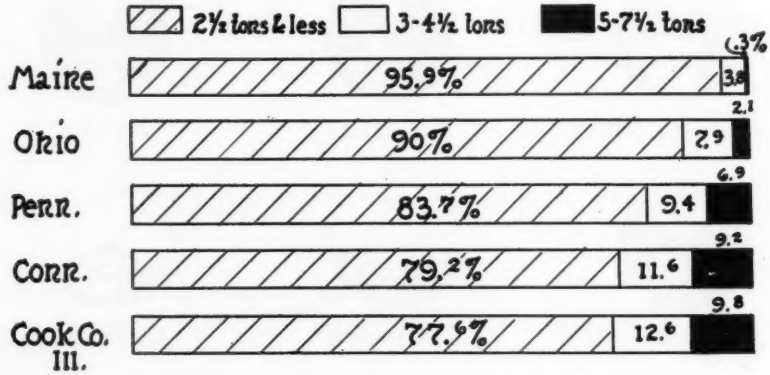
Leonard J. Anderson, Traffic Manager of the St. Paul Union Stockyards, stated at the Interstate Commerce Commission hearing held at St. Paul, that during the past year 84,000 carloads of livestock were received by rail and 47,337 truck loads, or an equivalent of 6,000 carloads, by motor vehicle. Of the amount shipped by truck, 75% originates within an area of 60 miles from the yards.

TYPE OF VEHICLES USED

Small Trucks Predominate.

From 77.3% to 95.9% of all loaded trucks operating over the highways in four areas were found to be of 2½ ton capacity, or less. Trucks of 5 to 7½ ton capacity ranged from .3% to 9.8% of the total of loaded trucks operating in the same area:

Area	Percentage of loaded trucks of 2½ ton capacities, or less	Percentage of loaded trucks of rated capacity of from 5 to 7½ tons
Maine	95.9%	0.3%
Pennsylvania	83.7%	6.9%
Connecticut	79.2%	9.2%
Cook County, Illinois	77.6%	9.8%
Ohio	90.0%	2.1%



Ohio Trucks Largely Small Capacity.

*The trucks in use on Ohio highways during 1925, classified by capacity, range as follows:

Capacity group Tons	% of total loaded trucks	Average net load of cargo per truck—Pounds
½ to 1½	73.4	1,540
2 to 2½	16.6	4,260
3 to 4	7.9	6,310
5 to 5½	2.0	7,970
6 to 7½	.1	6,930
	Total 100.0	2,570

*The maximum gross load limitation of 20,000 pounds on Ohio state highways influences the size and net and gross loads of motor trucks using Ohio highways.

Capacities and Average Trip of Loaded Trucks in Cook County, Illinois.

The average trip mileage of 25,000 loaded motor trucks, divided according to capacity, was obtained in the Cook County, Illinois, survey. The following table sets forth this information:

Capacity Tons	No. of loaded trucks	Average trip mileage Miles
½	2,408	23
¾	1,634	26
1	7,262	25
1¼	1,378	38
1½	1,855	26
2	1,917	28
2½	3,149	30
3	424	39
3½	2,628	27
4	94	29
5	2,157	24
5½	18	27
6	35	16
6½	33	30
7½	246	17
	Total 25,238	27

EXTENT OF INTERSTATE OPERATION

Interstate Trucking in Ohio-Pennsylvania Small Part of Total.

Traffic crossing state boundary lines is for the most part a local movement. Government observers in Pennsylvania at stations within 16 miles of the state line found that almost one-third of the motor trucks were foreign.

At interior points in Pennsylvania, but 1.8% of the motor trucks were foreign. These interior points taken as samples were distant from the state line from 42 to 110 miles. The average distance of these stations from the state line was 62 miles.

A similar study in Ohio shows that at interior points distance on the average, 68 miles from the state line the foreign motor trucks averaged 4.5% of the total. These stations ranged from 41 miles to 120 miles from the state line.

Taking all the stations in Ohio into account, it was found that the foreign motor trucks were 4.7% of all traffic.

In Pennsylvania, the foreign motor trucks were 4.4% of all traffic.

Trucking Predominantly Intra-state in Connecticut.

Of the total tonnage hauled on a state system government studies have found a small part interstate commercial. In Connecticut the interstate commercial movement was 6.9% of the total net tonnage, indicating, according to the government report that "the transportation of goods by motor truck is now primarily intrastate and by the nature of the case will probably remain intrastate haulage."

Ratio Foreign and State Trucks and Average Trip Mileage on Connecticut Highways.

Motor trucks of Connecticut registration and those of foreign registration on Connecticut highways, together with the average trip mileage per truck for each group is:

	% of total	Av. trip in miles
Connecticut registration	89.1%	15.7
Foreign trucks	10.9%	71.9

Distribution of Loaded Trucks, State and Foreign, by Capacity.

The distribution of loaded trucks by capacities of both Connecticut and foreign registered trucks operating on the Connecticut roads was:

Truck Capacity	Connecticut Registration (per cent)	Foreign Registration (per cent)
½	25.3	14.2
¾	4.1	4.0
1	17.7	10.9
1¼	13.0	7.8
1½	6.4	3.3
2	9.8	13.0
2½	3.8	3.9
3	1.6	1.7
3½	7.3	9.2
4	.7	1.2
5	9.0	26.6
5½	.4	1.4
6	.3	.5
6½	.5	1.2
7½	.1	1.1
	100.0	100.0

Division Gross Ton Mileage.

The division of gross ton mileage between Connecticut and foreign trucks was:

Connecticut registration	67.2%
Foreign registration	32.8%

Interstate Trucking Equalizes Between States.

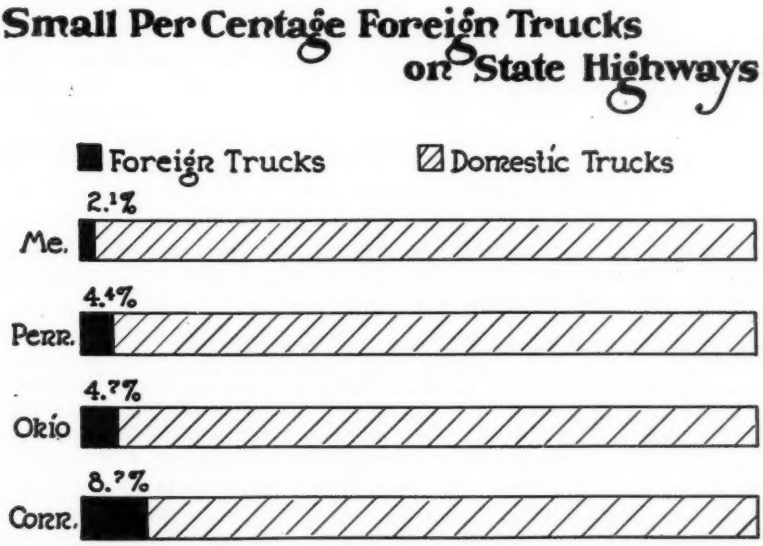
In reporting on the Connecticut highway transport survey, the fact that interstate trucking equalizes between states is clearly defined:

"The normal interchange of trucking between two states will tend to be divided equally among trucks registered in each of the two states. This is indicated by Table 30, in that the Connecticut trucks transporting goods between Connecticut and foreign points are shown to be 8.7% of the total, and the foreign trucks transporting goods between Connecticut and foreign points are 8.2% of the total number of trucks. The similarity of average trip mileage and mileage on Connecticut highways of these classes of movement is additional proof of this fact."

Foreign Trucks on Maine Highways Negligible.

"The use of the state's roads by foreign motor trucks is much less extensive than its use by passenger (foreign) cars except near the state line, and on a few major highways, is negligible," is reported in the highway transportation survey of Maine.

Foreign motor trucks account for only 2.1% of the motor truck miles on the primary system, 1.6% on the secondary system, and on the third class system their influence is negligible.



The table showing utilization of main highway systems by Maine and foreign motor trucks follows:

System Registration	Percentage of State and Foreign Vehicles	Average Density of Traffic, State and Foreign Vehicles	Daily Vehicle-Miles by State and Foreign Vehicles	Total Vehicle-Miles by State and Foreign Vehicles, July 1 to October 31, 1924
	Per cent	Vehicles per day	Vehicle-Miles	Vehicle-Miles
Primary—Maine	97.9	92	150,800	18,544,000
Primary—Foreign	2.1	2	3,200	398,000
Total	100.0	94	154,000	18,942,000
Secondary—Maine	98.4	22.6	91,500	11,256,000
Secondary—Foreign	1.6	.4	1,500	183,000
Total	100.0	23.0	93,000	11,439,000
Third Class—Maine	100.0	2.0	36,000	4,428,000
Third Class—Foreign	.....	.....	.....	.....
Total	100.0	2.0	36,000	4,428,000

Foreign Trucks on Ohio Roads.

Ohio trucks operating on the state highways represent 95.3% of the total daily truck miles, which trucks of foreign registration amounted to 4.7% of the total daily truck miles.

The average cargo of foreign trucks is 2,900 pounds as compared with an average of 2,580 pounds for Ohio trucks. This variation is due principally to the smaller proportion of small capacity trucks among those of foreign registration. The average trip mileage of foreign truck traffic is 153 miles as compared with an average of 26 miles for Ohio trucks.

The principal commodities transported by foreign trucks are household goods, automobile bodies and parts, and general express. These commodities form over 40% of all tonnage transported in trucks of foreign registration.

Interstate Truck Tonnage Limited to Few Routes.

Of the tonnage carried by motor truck on the State Highway System of Connecticut from September, 1922, to September, 1923, 27.5% was interstate. Of this interstate tonnage 55 per cent is carried on the three principal routes into the state and 40% carried on the Post Road which connects the southern part of the state with New York City.

IV. Farm Use of Motor Trucks

Twenty Per Cent of All Trucks on Farms.

The registration of motor trucks on farms by states as of December 31, 1926, is given by Farm Journal as follows:

States	Motor Trucks	States	Motor Trucks
Texas	23,266	Maryland	8,634
Illinois	24,612	Mississippi	3,558
Ohio	33,852	Colorado	6,041
Iowa	22,000	Alabama	2,648
Pennsylvania	34,868	Arkansas	3,508
New York	36,748	Montana	3,931
Wisconsin	26,145	New Jersey	11,378
Indiana	23,091	Florida	7,913
Missouri	19,855	West Virginia	3,337
Minnesota	20,961	Massachusetts	11,279
Michigan	15,582	Louisiana	3,562
Kansas	15,018	Idaho	1,357
California	19,148	Maine	4,498
Nebraska	13,359	Connecticut	5,221
Oklahoma	10,838	Vermont	2,350
North Carolina	6,589	Utah	1,143
Virginia	11,617	New Hampshire	2,954
Georgia	5,503	Wyoming	1,575
South Dakota	6,824	New Mexico	1,290
Kentucky	5,477	Arizona	1,424
North Dakota	6,656	Delaware	2,549
Washington	10,330	Nevada	354
Tennessee	3,447	Rhode Island	857
Oregon	6,663		
South Carolina	5,972	Total	499,782

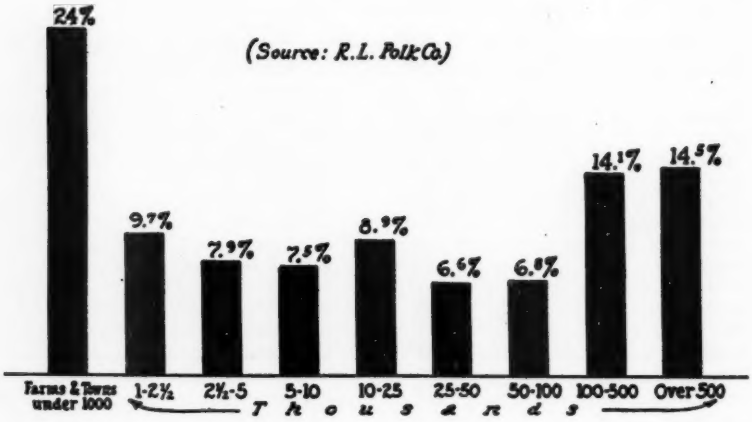
Motor Transport Factor in Farm Costs.

The Joint Commission on Agricultural Inquiry, making an extended study into agricultural conditions in 1921, reported on the influence of motor transportation on farm costs:

"Perhaps no single development since the railroads were first constructed has had so marked an economic and sociological effect upon productive life as the motor vehicle. Previous to its appearance, the economic zone of transportation was sharply defined by the haulage range of the horse and the cost of such transportation. Motor freight transportation has only become a factor within the last four years, but already has had an appreciable and growing influence on our whole transportation problem.

"Studies from the Bureau of Crop Estimates of the Department of Agriculture in 1918 show that the estimated cost for hauling in wagons from farms

Per Cent of Trucks in Use on Farms and in Cities



to shipping points averaged in 1918 about 30 cents per ton-mile for wheat, 35 cents for corn, and 48 cents for cotton; for hauling in motor trucks or by tractors the averages are 15 cents for wheat and corn and 18 cents per ton-mile for cotton. While most of the hauling from farms is done by the farmers themselves, these estimated costs are based largely upon the usual charge in the various counties for hiring team and wagon or for motor truck by the day.

"Motor truck hauling of these commodities in 1918 from farm to railroad shipping points averaged 11.3 miles, while wagon hauls averaged 9 miles; and a motor truck made 3.4 round trips per day over its longer route, while wagons made 1.2 round trips per day."

National Grange Believes Highway Transport Essential to Farmer.

In presenting a statement to the Interstate Commerce Commission at its Washington hearing on motor truck and bus operation, October, 1926, Dr. T. C. Atkeson, Washington representative of the Grange, emphasized the vital part highway transport plays in farm life:

"The people on the farms of the United States are concerned about the building of highways and their use in highway transport for both economic and sociological reasons. The improvement of highways and their maintenance in usable condition in all seasons and all weathers makes possible the transport of goods and persons in the country in a measure commensurate and comparable with the movement of persons and goods in urban communities. This is a

consideration which is of national importance, for without this opportunity for freedom of movement, that is, equal transportation facilities, American men and women can no longer be expected to remain on the farms."

Michigan Farmers Use Truck.

At the Detroit hearing of the Interstate Commerce Commission on the subject of motor truck and bus operation, Mr. V. P. Mills, Traffic Manager of the Michigan State Farm Bureau, which is comprised of 25 affiliated farm exchanges and 45,000 Michigan farmers, stated that 60% of the farmers owned and operated their own trucks. The witness stated that there are 770 cooperative marketing associations in Michigan, and that 90% of the farm products marketed through these associations are received from railroads and 10% from trucks. He stated that trucks have added more tonnage to the railroads than they have taken away.

Truck Aids Diversified Farming.

The Director of the State Department of Agriculture of North Carolina credits the improved roads of the state and the motor truck with having made diversified farming possible in that state. He says in part:

". . . . The good roads in this part of the state have made it possible to supply the manufacturing cities from farms located as many as 40 miles away or further. Prior to the advent of good roads the farmer who lived as much as 10 miles from town rarely took produce to market unless his roads were in what he would call prime condition, and then it took him an entire day to make the trip. The town was forced to get its supplies from sources outside the state, as it could hardly draw on more than 75 square miles of territory for local production. With the coming of good roads the market gardens of the cities have grown from the former area of 50 to 75 square miles to 1,000 to 1,200 square miles or more. Here we find diversified farming, cotton, corn, tobacco, potatoes, wheat, oats and vegetables all growing on the same farm the same year."

Farm Truck Feeds City.

The city of Altoona, Pennsylvania, derives a continually increasing proportion of its food supply from adjacent farm territory by means of improved roads and the motor truck, according to Bulletin No. 184, of the Pennsylvania Agricultural Experiment Station, stating:

". . . . The motor truck is coming to play a more and important part in the transportation of food products into Altoona, and in the redistribution of commodities to nearby points. This extensive use of the motor truck has been made possible by a system of hard surface roads extending out from Altoona to most of the productive centers of the county. The further exten-

sion of these roads would no doubt increase the available food supply of the city, and furnish the farmers in outlying districts with a larger market. During the past year motor trucks brought in 7,750 tons of dairy products or 40% of the total consumption; 1,200 tons of potatoes, and a portion of the live stock, poultry products, fruit and vegetables produced in Blair County and parts of adjacent counties. . . ."

Produce Hauled to Minneapolis Market by Trucks.

At the Interstate Commerce Commission hearing in St. Paul, July, 1926, on motor truck and bus operation, R. H. Adams, Market Master of the Minneapolis City Market, said 100% of the produce brought into the market came by motor truck. The bulk of this business originates within 30 miles of the market. He estimates that between 400 and 800 trucks, depending upon the season, are used in the distribution of the farmers' product from the market.

Milk Brought in to Kansas City by Farm Truck.

Mr. Charles A. Hyle, Treasurer of the Chapman Dairy Company of Kansas City, presented testimony at the Interstate Commerce Commission hearing in Kansas City, Missouri, September, 1926, on truck and bus operation, showing the extent of the use of trucks in the delivery of milk in Kansas City. He explained that the milk is brought to distributing stations from the farms by trucks and that from these stations it is brought into Kansas City by rail where the distance is considerable. Where the hauls are short—about 25 or 30 miles—this milk is gathered from the farms by truck and taken to the distributing station and there put in tank trucks and taken to the plant in Kansas City. His own company operates 15 trucks gathering milk and hauling to the distributing stations, and 25 trucks are used to distribute milk within Kansas City. The balance of the milk is hauled either by the farmers themselves or by trucks which are operated for hire. He stated that the use of trucks has greatly aided in the development of the milk industry.

Commodities Moved to and from Farm by Truck in New York.

The Cornell University Agriculture Experiment Station, in its Bulletin 427, March, 1924, reports a group of 251 farmers as hauling on the highway the following materials in their trucks for their own farms:

Material hauled	Number owners reporting this kind of hauling	Amount hauling per truck Load	Tons	Ton-Miles	Miles
Crops	176	66.0	103.9	737.7	469.0
Milk	80	81.5	46.9	275.6	352.3
Feed	82	10.8	8.5	61.5	62.4
Commercial fertilizer	41	1.6	3.4	8.5	18.1
Lime	20	1.0	1.2	7.6	6.6
Manure	9	3.2	6.8	19.1	55.8
All else	98	23.4	20.4	118.2	165.9
Total		187.5	191.1	1,276.5	1,083.8

Cooperative Associations Use Trucks.

A statement by J. G. K. McClure, Jr., President of the Farmers' Federation of Asheville, North Carolina, at the Interstate Commerce Commission hearing in Asheville, September, 1926, on truck and bus operation indicates the extent of truck operation by the Federation at that time:

"We operate fifteen trucks. These trucks collect and distribute. As an illustration, two years ago we commenced shipping cars of live poultry. We are able to assemble this poultry by bringing poultry in by means of trucks from many different sections. This enables us to have a cash market for poultry not only on the car, but many miles out from the railroad. . . . . We are able to ship in carload lots because we tap our surrounding territory without trucks. We also distribute fertilizer and feeds with our trucks over quite a territory. The tonnage of fertilizer has probably increased three or four times. . . . The railroad has cooperated with us in every way. . . . We are developing townships and counties which would still be isolated if it were not for the truck. . . ."

Minnesota Group Use Trucks.

At the St. Paul hearing of the Interstate Commerce Commission, C. B. Beyer, representing the Minnesota Farm Products Association, explained the use of trucks by his organization since May 5, 1924, to the present time. Common carrier trucks are utilized for hauling produce between country points and concentration terminals. In his opinion, the volume of business handled by members of his association has increased since the advent of the motor truck. One advantage to be gained through the use of trucks in the transportation of eggs was the speed with which they could be moved through the concentration and assembly points where there existed no refrigeration facilities. The use of rail transportation, because of the delay in getting cars, would necessitate refrigeration facilities at these points.

Farm Truck Feeder to Railroad.

"The farm motor truck is a cooperator, not a competitor, of the railroad. Only a small part of the truck hauling done by the farmers included in this study actually replaced railroad freight, since most of it consisted of hauling between the farm and the railroad." The statement appears in Bulletin 427, May, 1924, from the Cornell Agricultural Experiment Station. It continues: "Some hauling was done parallel to railroads; a part of this was in order to reach a more favorable shipping point; a part of it was hauling products that railroads could not have handled; but the greatest part was hauling products that would not have been produced had it not been for the truck.

"A limited amount of the hauling which paralleled the railroads was in direct competition with them. A part of this was done, not because it was cheaper than railroad freight, but because it was thereby possible to get a product to market with only one handling instead of several. Probably the principal reason, however, was that it enabled the farmer to get his product through to market before it spoiled. There is little doubt that the farm motor truck creates more new freight for the railroads than it takes from them."

New Tonnage Created for Rail Lines.

"Improved roads to Bent Mountain have made it possible to extend the local marketing period of late cabbage to March or April by storage," reports Bulletin 240, March, 1925, from the Virginia Agricultural Experiment Station. "During this period, in the year ending June 30, 1924, more than 400,000 pounds of cabbage were received in Roanoke over the railroads. . . ."

Use of Truck in Bringing Farm Produce to Local Markets.

That motor trucks and the improvements in roads have had a marked beneficial effect upon the production and marketing of farm products is definitely shown as the result of various cooperative studies carried on by the U. S. Bureau of Agricultural Economics and State Experiment Stations and Departments of Agriculture. The Bureau reports:

"Motor trucks and improved roads have extended the potential food producing area around a city and the marketing area of individual producers. The extension of this producing area is causing the concentration of production in those areas most favorably located particularly as to soil and climate. More emphasis is placed upon good producing areas. Enlarging the local market for individual producers is also encouraging commercial production

in supplying these markets. Farmers are slowly adjusting their farm enterprises to meet these changed conditions in transportation. Complete adjustments have not been made but a few examples of what is taking place in a number of areas are pointed out in this report.

Cheshire County, New Hampshire.

"The motor truck and improved roads are affecting the distribution of farm products in Cheshire County, New Hampshire, to a very marked extent. Regular truck lines have been established between wholesalers in Boston and retailers in Keene, New Hampshire. Independent truck lines have also been established between Keene, and many other towns within a radius of forty to sixty miles. These trucks furnish service for short distances and deliver direct to the wholesaler or retailer's door.

Roanoke, Virginia.

"The motor truck and improved roads are affecting the location of producing areas and the marketing of farm products to a marked extent in Roanoke's trade territory. A complete network of motor truck lines extending from Roanoke to producing areas and markets within a radius of 75 to 150 miles has been established within the last few years.

"During the year ending June 30, 1924, motor trucks brought 5,000,000 pounds of milk to Roanoke from Botetrout County, where only 1,000,000 pounds were furnished in the year ending June 30, 1920. Milk is now hauled a distance of 41 miles at a cost of five cents per hundred pounds. Commercial dairying in this country has been built up largely because of the motor truck and improved roads. Truck lines for gathering milk have also been established between Roanoke and Floyd Courthouse in Floyd County, a distance of 35 miles, and Shawsville in Montgomery County, a distance of 22 miles.

"The area of production of poultry and eggs for the Roanoke area are being extended by the use of motor trucks. One large wholesale poultry company is now sending trucks regularly into Monroe and Summers Counties, West Virginia, a distance of about 70 miles, to buy poultry, eggs and butter from farmers and local stores. Trucks are also being sent out in other directions. Roanoke has become a wholesale poultry and egg center for a producing area of from 75 to 150 miles largely because the use of motor trucks has extended the local market area.

"The extent to which motor trucks and autos are being used in marketing farm products, especially vegetables and poultry and eggs, is shown in the following table of loads on the curb market during the week ending July 19, 1925.

Number of truck, auto, two-horse and one-horse wagon loads sold on curb markets, July 14th to 17th, 1924.

Length of Haul in Miles	0-5	6-10	11-15	16-20	21-25	26-50
Number of trucks	187	152	44	11	25	46
Number of autos	154	117	100	26	46	7
Number of wagons	68	40	9	5	9	—
Number one-horse wagons	32	14	—	—	—	—

"Trucks and autos predominate on this market. This is especially true of those loads hauled more than 10 miles.

Charleston, West Virginia,

"The lack of hard surfaced roads in the trade territory of Charleston, West Virginia, has limited the use of motor trucks in the marketing of farm products. Vegetable growers in the excellent producing section around Point Pleasant, West Virginia, now must either haul their products by way of Huntington, West Virginia, to Charleston, a distance of 74 miles, or ship them by rail. Some of them are hauling by Huntington and even going farther south direct to the coal fields. Hard-surfaced roads now under construction, however, will connect Point Pleasant with Charleston by a 50-mile highway and Ripley with Charleston by a 30-mile highway.

"The completion of these highways will stimulate the movement of vegetables, fruit, dairy and poultry products from these areas by motor truck to Charleston. High transportation rates on short hauls now discourage production in these areas for the Charleston market. The freight rate on potatoes from Ripley, West Virginia, to Charleston, a distance of 103 miles, is 31.5 cents per cwt., while from Syracuse, New York, a distance of 741 miles, the rate is only 34 cents per cwt. From Ripley to Charleston over the new road will be about 30 miles, and motor trucks should materially reduce the cost of transportation and lessen the time in transit.

Atlantic City, New Jersey.

"A large portion of the farm produce brought into Atlantic City comes by way of motor truck. During the summer months an average of sixty or more motor vehicles drive into the municipal markets daily, while two dozen more larger trucks supply the wholesale market on Fairmount Avenue with its needs each day. Approximately 90 per cent of the fresh food products brought into Atlantic City comes in by means of motor trucks and as each year passes this type of transportation becomes a more and more important factor in the food supply problem of the city."

Shreveport, Louisiana.

"Motor truck transportation has reached a comparatively high stage of development in this area. Bus lines operate in all directions from the city on regular schedules, and several commercial houses have regular truck lines for delivering goods to surrounding cities and towns. The good highways make accessible a large agricultural area which hauls large quantities of products into the city. An extensive use is made of the good roads by hucksters and producers of truck crops, fruits, poultry and poultry products, who haul from local producing areas and from points in Texas and Arkansas, whose distances range from 40 to 150 miles from Shreveport."

Richmond, Indiana.

"The good roads in Wayne County promote the growth of commerce in Richmond. Large quantities of surplus farm products are collected into the city for shipment to the large markets and large quantities of manufactured products are distributed to surrounding trade territories.

"The following table indicates the value per load and distance traveled by farmers selling products at the Richmond city market:

Number of farmers	Average length of haul	Value per load—Medium
7	3.9	30.00
2	4.5	60.00
2	6.5	37.50
1	3.0	100.00
1	8.0	12.00
1	9.0	20.00
1	10.0	10.00
1	22.0	30.00
16	6.3	30.00

New Orleans, Louisiana.

"The size of the garden truck industry around New Orleans does not seem to be appreciated by the public nor is its importance to the prosperity of the city considered. A survey of the farmers coming to the market was made during the first half of July, 1925. Twelve hundred farmers' vehicles brought to the market during the two weeks a daily average of nearly $3,000 worth of fruits and vegetables grown in the parishes of Ascension, Assumption, Jefferson, Orleans, East Baton Rouge. The value of about one-fifth of the loads was somewhat less than $10 per load. Half of the loads ranged in value between $10 and $30 each. One-eighth of the loads had a value of between $30 and $40. Nearly one-fifth of the loads had values ranging from $40 to $100 and over. The average value per load was highest from distant parishes as a rule, and lowest from areas close to New Orleans, where more frequent trips to and from the farm seemed better economy.

"About half the farmers used the market regularly once a week. Over one-fourth were regular marketers twice a week and about one-eighth three times a week. A few local growers marketed more often. Some maintained a vehicle all of the time at the market and hauled fresh supplies as the supply was sold. They assured themselves vehicle space at advantageous locations by doing this. Some growers came only at times when they had full loads to sell, once, twice, or several times a month or even a year.

"Over one-fourth of the farmers used teams, two-thirds used trucks and a few used autos. Of the entire group actual growers comprised 96 per cent of the marketers. Hucksters or dealers who had bought products from growers comprised 3 per cent and employees 1 per cent.

"Growers frequently came from long distances and the marketing required many hours. The average number of miles per trip and hours required for the growers to make the trips and sell the loads as computed from principal parishes as follows:

Parish	Hours per trip	Miles per trip
Orleans	8.5	5.7
Jefferson	10.4	8.8
St. Bernard	10.3	11.1
Pláquemines	12.9	20.7
Other parishes	19.6	41.3

"Many farmers reported that often one or more days were used up in disposing of their loads and making their trips. Instances were found where growers had to wait considerable time to find a space near enough to the market to get in touch with buyers. Farmers who came infrequently and from distances were greatly handicapped and oftentimes discouraged."

Lebanon, Pennsylvania.

"The motor truck holds an important place in the distribution of products, both to and from the county. Improved highways connect Lebanon with the more important towns in the county and with larger consuming and distributing centers, such as Harrisburg, Reading, Pottstown and Philadelphia. Peaches, apples and potatoes are brought into Lebanon from adjacent counties by motor truck. Fresh meat, butter and storage eggs are trucked in from Harrisburg and Reading. Motor trucks are used to handle millions of pounds of milk collected in this and surrounding counties by the Hershey Chocolate Company. . . .

"Eggs are sent from Lebanon to New York or Philadelphia by express or trucked to Harrisburg, Reading, Philadelphia. Some dressed poultry is shipped by express. Live poultry is sent out almost entirely by truck."

Farm Truck on Ohio Roads.

Traffic of farm-owned trucks produces 15.5% of the total truck-mileage on the Ohio state highway system. It is primarily a local farm-to-market movement and is more uniformly distributed than the traffic of trucks owned in cities. The volume of traffic by farm-owned trucks varies with the agricultural development of the area. The greatest of farm trucks are found near the larger cities on the routes which bring into the cities the largest volume of farm products. The smallest numbers are found in the lesser agricultural areas, but in the greater part of the state this traffic is quite uniform. The average trip-mileage of farm-owned trucks is 20 miles as compared with 34 miles for trucks owned in cities, and the average net load per truck is 1,830 pounds as compared with 2,720 pounds for trucks owned in cities.

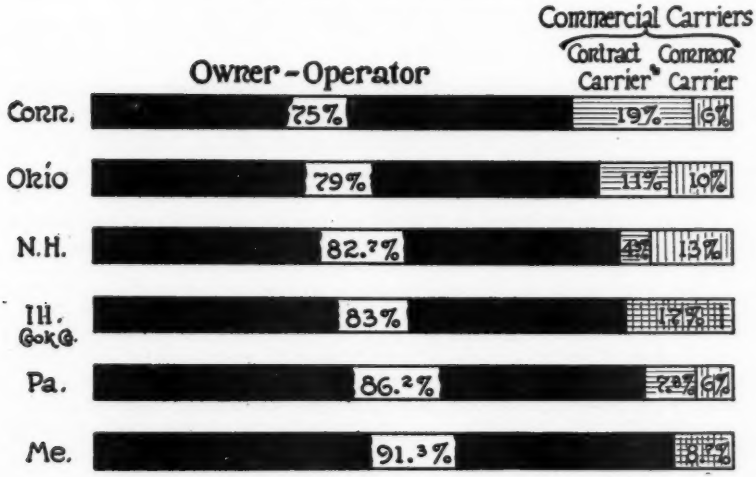
V. Trucks Operating for Hire

Extent of For Hire Trucking.

The common carrier truck handles but from 6% to 8% of the total tonnage carried on the highways, and only 1% to 2% of the interstate motor truck tonnage. Common carrier trucks represent but from 5% to 10% of the total number operating; contract carriers in general are about twice as numerous as the common carrier, while both combined range from 9% to 25% of the total of all trucks operating in the areas surveyed. Percentages of each group are as follows:

Area	Per cent of common carrier trucks in relation to total trucks	Per cent of contract carriers in relation to total trucks	Per cent of for hire trucks both contract and common carrier in relation to total trucks
Maine	.....	.....	9%
Cook County, Ill.	.....	.....	17%
New Hamphire	5%	12%	17%
Connecticut	6%	19%	25%
Pennsylvania	6%	12%	18%
Ohio	10%	11%	21%

Per Cent Owner-Operator Trucks Compared with Commercial Carriers



General Character of Service.

"Within the field of commercial trucking, which comprises 17% of the motor trucks recorded in the survey, conditions are quite similar," states the Cook County, Illinois, highway transportation report. Only a relatively small number of trucks operate regularly over established routes. Operating companies are small with few exceptions, and their field of operation local. The number of companies engaged in intercity trucking is very small. Only a few of the larger operators maintain general offices, although joint offices are maintained in some cases, especially among operators having their headquarters in the suburban areas. The primary purpose of such joint offices is to obtain return loads.

"A tendency toward specialization in the field of commercial trucking is evident in the Chicago area. The following classes of trucking are developing:

Group 1. Excavators, wreckers, coal, building material and cinder haulers and scavengers.

Group 2. Haulers of perishable products, vegetables, fruits and dairy produce.

Group 3. Movers and erectors of machinery.

Group 4. Haulers of furniture, pianos and package freight.

Group 5. General cartage companies, i. e., firms engaged in hauling practically all types of goods, except those listed in Groups 1 to 4. Even in this group there is a tendency for each operator to confine his hauling to certain commodities or groups of commodities.

"Established schedules of rates are rarely used; competition is very keen, and rates for individual shipments are usually determined by bargaining. A considerable part of the business of the stronger trucking companies is handled on a contract basis. The contracts are for varying periods of time, in some cases for a year or longer, and may be at a stipulated weekly rate for the services of a definite number of trucks, or at a stipulated rate per package hauled.

"Records of trucking costs in sufficiently detailed form to permit their use in controlling trucking operations, i. e., in establishing rates, in determining the most economical type of equipment, or in establishing equipment maintenance policies, are kept by few operators. This absence (of established rate schedules and trucking costs, and the keenness) of competition have intensified the lack of organization in the field."

Length of Haul.

The average trip mileage in Ohio of commercial trucks (either operating for hire or under contract) during 1925, was 45 miles, and of non-commercial trucks 29 miles. A comparison of the mileage indicates that 60% of the commercial trucks operate less than 40 miles compared with 85% of the privately operated trucks in this zone:

Length of Trip	Trucks for Hire	Privately Operated Trucks
0-19 miles	42.5%	61.9%
20-39 miles	27.8%	22.8%
40-99 miles	19.8%	11.8%
100 or more	9.9%	3.5%
	100.0	100.0

It should be noted in this connection that the for hire trucks were 21% of the total number and accounted for 21.1% of the total daily truck miles.

Range of Operation Minnesota Common Carriers.

At the St. Paul hearing before the Interstate Commerce Commission, the average length of haul of 19 motor truck common carriers in Minnesota were given, together with route mileage as follows:

Length of haul		Total route mileage	
Minimum	12 miles	Minimum	24 miles
Maximum	100 miles	Maximum	177 miles
Average	40 miles	Average	76.4 miles

Commodities Carried.

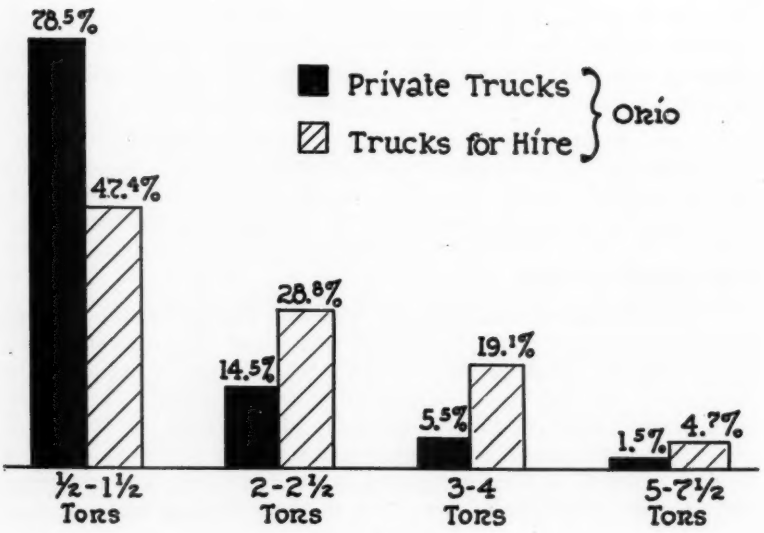
Special commodities generally comprise the bulk of the tonnage carried in hired trucks. In Ohio it was found that approximately two-thirds the total number of hired trucks were engaged in the haulage of the eight commodities listed below. Nearly 74% of the milk hauled by trucks in Ohio moves in hired trucks—21% of such vehicles being engaged in this one business. The other commodities hauled, percentage trucks engaged in moving them, average cargo and average trip mileage are given in the following table:

Commodity	Percentage of total number of hired trucks	Average Cargo Pounds	Average trip Mileage Miles
Household goods	11.0	3,690	127
Cans, empty milk	10.5	1,790	25
Milk	10.2	5,060	27
General freight	8.2	5,010	39
Clay, gravel, sand and stone	8.0	7,180	9
Coal	7.8	4,440	6
General express	5.0	7,900	67
Groceries	4.7	5,930	45
Miscellaneous	34.6	5,410	49
Total and average	100.0	4,370	45

Types of Vehicles Used.

A larger percentage of the heavier trucks are used by the for hire operators than are used by the private operators. Both, however, use a predominately large percentage of the small capacity vehicles, as indicated by the data from Ohio:

Capacities of Commercial and Private Trucks



Capacity of truck Tons	Per cent of total number of trucks operated for hire (21% of all trucks)	Per cent of total number of privately operated trucks (79% of all trucks)
½—1½	47.4	78.5
2—2½	28.8	14.5
3—4	19.1	5.5
5—7½	4.7	1.5
Total	100.0	100.0

Farm Hauling for Hire.

In a survey of 251 farm truck owners from various parts of New York State the Agricultural Experiment Station of Cornell University found 12.5% of these farmers did some custom hauling, i. e., hauling for hire:

Material hauled	No. owners reporting	Amount of custom hauling per truck			
		Loads	Tons	Miles	Ton-Miles
Crops	31	2.3	4.6	27.8	51.5
Milk	13	10.1	6.8	55.8	39.0
Feed	10	1.6	1.9	16.4	23.7
Fertilizer	4	0.1	0.4	1.6	10.4
Lime	3	0.1	0.1	0.3	0.7
Manure	1	0.1	0.1	0.3	0.9
All else	27	3.8	5.0	78.3	56.0
Total	89	18.1	18.9	180.7	182.2

Extent of Interstate Operation.

According to the Bureau of Public Roads surveys, but from 1% to 2% of the motor truck tonnage moving interstate is handled by the common carrier trucker.

1.7% Tonnage in Connecticut Interstate Common Carrier Movement

Interstate commercial trucking constituted 6.9% of the total tonnage handled by trucks in Connecticut in the year analyzed by the Bureau. Of this 5.2% was contract hauling and 1.7% tariff hauling or common carrier. But 1.7% of the total truck tonnage was therefore interstate common carrier.

Limited Common Carrier Interstate Movement in Pennsylvania.

The tonnage of commercial motor truck freight in interstate movement on 24 state highways in Pennsylvania during 1924 was approximately 1,200 tons per day. Over one-half of this tonnage is

on the route between Philadelphia and Trenton, New Jersey, a large part of which tonnage is the local distribution of goods from Trenton, New Jersey. With the exception of this route and the Philadelphia-Chester-Wilmington route the average daily tonnage of commercial interstate motor truck freight is 11.5 tons per route per day. (Both contract and common carrier hauling.)

Negligible Amount Interstate Common Carrier Trucking in Minnesota.

Testimony presented at the St. Paul hearing before the Interstate Commerce Commission was to the effect that 99% of all truck operations in the state is intrastate. At that time there were registered in the state but 500 common carrier trucks, while privately owned and general transportation trucks, exclusive of farm and dairy trucks, totalled 34,000.

VI. Truck Influence on the Highway

Roads Would Be Built Whether Trucks Operated or Not.

"Summing up, then, I think it is evident that: (1) there would be a demand for improved roads whether commercial vehicles were operated over them or not," says T. H. MacDonald, Chief of the U. S. Bureau of Public Roads in "Commercial Vehicles on Free Highways" in the October, 1925, issue of the Journal of Land and Public Utility Economics. He continues: "(2) as a general rule the passenger car traffic is at least ten times as great as the motor truck traffic; (3) the roads required for the accommodation of the passenger car traffic would be adequate for the transport of freight in one-ton trucks; (4) the use of larger units makes for more economical operation; (5) the heavy motor trucks do not destroy roads that are built to accommodate them; and (6) if the construction of the roads is properly related to the character of the traffic, the operation of the heavier truck units produces savings which more than offset the greater cost of the roads. . . ."

Trucks Not Destroying Roads.

Secretary of Agriculture, William Jardine, in speaking before the Mid-West Transportation Conference in Chicago in May, 1925, refuted the idea that motor trucks are smashing the roads:

"There is one other popular idea I feel disposed to deny. That is the idea that motor trucks are destroying our roads. I don't know why it should need denial, but apparently it does. Look around you. Are the roads getting better or worse? Have we ever before had such fine ones or so many of them? Have we ever before had fewer of them in a state of disrepair? Well, there are now as many motor trucks using these roads as there were of all kinds of motor vehicles ten years ago, but the cost of the roads per ton-mile of traffic is far less now than it was then. This has been accomplished, first, by the really notable improvements that have been made in the design of highway surface; second, by the building up of efficient administrative and engineering organizations; and third, by the greatly increased use which far exceeds the increase in the cost of the roads. Even in the state of Maine, remote as it is from the centers of big business expansion, our surveys show that highway traffic doubled from 1916 to 1919; it doubled again from 1920 to 1924, and we confidently expect it to double again by 1930.

"The idea that trucks destroy roads is a hangover from the war period when they were actually destroyed, for two very good reasons; first, because the heavier motor trucks—then comparatively new—were suddenly released on roads which had not been built to accommodate them; and, second, because at that very time the expenditure of money for highway maintenance was declared to be non-essential to the winning of the war and discouraged.

"The roads we are building now are built to accommodate the traffic they will be called upon to carry, as determined by surveys such as I have just described. And they are maintained. They wear out just as rails and locomotives and motor trucks wear out, but they are not destroyed."

No One Class of Trucks Responsible for Increased Road Costs.

Governmental research has indicated that the action of frost, character of sub-grades, volume and character of traffic are the chief factors in road cost. With reference to the traffic factors the evidence shows that all types of trucks* are operated by both commercial truckers (common carrier and contract carrier) and the owner-operator. Since this is a fact it cannot fairly be stated that the common carrier truck—contract carrier—or the owner-operator truck has any independent effect either upon road building or upkeep cost.

Trucks Small Part of Maine Primary Highway Traffic.

The average density of motor truck traffic on the primary highways of the state of Maine is 9%. Figures for the primary, secondary and third-class highways systems, July 1 to October 31, 1924, are:

Highway system	Aver. density of passenger car traffic Vehicles per day	Aver. density of motor truck traffic Vehicles per day	Ratio of truck to total traffic Per cent
Primary (1,630 miles)	950	94	9%
Secondary (4,049 miles)	221	23	9.4%
Third class (17,425 miles)	27	2	7%

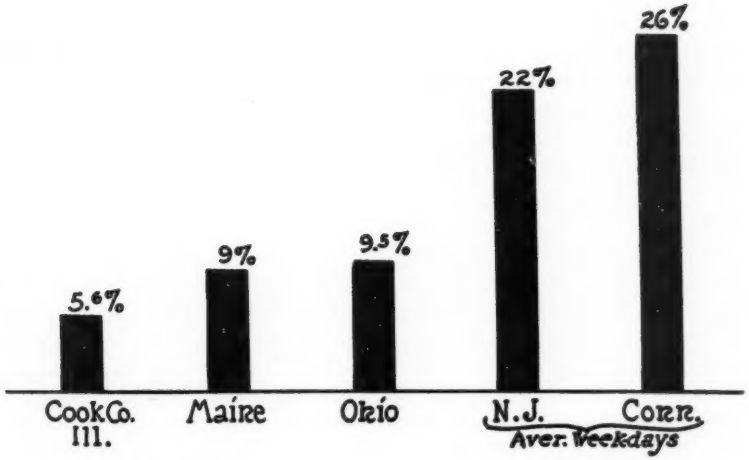
Cook County, Illinois.

Motor truck traffic on Cook County, Illinois, highways is approximately 5.6% of the total vehicular traffic. The Report of a Study of Highway Traffic and the Highway System in Cook County, further comments on the source of this traffic:

"It is apparent that Chicago and towns located within a radius of five miles from the city limits produce the great bulk of the truck traffic on the highways of the county. The movement of large capacity trucks is limited to traffic between a comparatively small number of points. . . ."

*See Types of Vehicles Used, under TRUCKS OPERATING FOR HIRE.

Relation of Truck to Total Highway Traffic



The traffic density of both passenger cars and motor trucks traversing congested areas near the Chicago limits are given in tabular form:

Congested traffic areas	Average daily traffic: Passenger cars	Motor trucks	Total	Average maximum traffic*
1. Green Bay Road North of Glencoe	6,491	240	6,731	15,200
2. Waukegan-Milwaukee Road — Milwaukee Ave., Rand Road—Northwest Highway, Higgins Road	14,568	861	15,429	34,210
3. Lake St., Roosevelt Road, Ogden Ave.	20,342	1,381	21,723	47,810
4. Western Ave., Halsted St., State St.	20,776	1,152	21,928	48,760
5. Indianapolis Ave.†	11,853	782	12,635	27,850
Total	74,030	4,416	78,446	173,830

*Average Sunday density.

†Indianapolis Avenue is a direct route between Indiana and Chicago and is the only important highway entering the city that is not under the jurisdiction of the county.

Connecticut.

The average daily traffic on the important highways of Connecticut during 1922-1923 was 3,150 vehicles, while the maximum day's volume of traffic was 8,000 vehicles.

Motor truck traffic averaged 820 vehicles daily with a maximum day of 1,200 trucks. Motor trucks, therefore, represented 26% of the traffic on average days.

Truck traffic is very uniform from Monday through Friday. On Saturday it is somewhat lower than on other week days, and on Sunday it is very low compared with other days of the week.

Ohio.

Motor trucks account for 9.5% of the total vehicular miles on the Ohio primary system, 10.9% on the county highways, and 11.2% on the township highways. More detailed figures are given in the table below.

System	Daily truck miles	Per cent of total truck miles	Daily passenger car miles	Per cent of total pass. miles	Ratio of truck mile to total vehicle miles
State highways	565,000	54.1	5,354,000	58.1	9.5
County highways	332,000	31.8	2,706,000	29.3	10.9
Township highways	147,000	14.1	1,160,000	12.6	11.2
	1,044,000	100.0	9,220,000	100.0	10.2

New Jersey.

The State Highway Engineer of New Jersey in a special report to the State Highway Commission in 1926, stated that the truck and bus were 22% of the week-day vehicular traffic on the highways, but indicates in his report, an excerpt of vehicles given herewith, that the passenger car is responsible for week-end congestion on the roads.

"The records of the department also indicate that of the total vehicles using our highways on week days, 22% are commercial vehicles, either trucks or buses, and on Sunday this percentage drops to approximately 5%, which indicates that the Sunday peaks are created by the increased use of the pleasure vehicle."

VII. Taxation

Motor Truck Taxes in 33 States.

In the 33 states which segregated motor truck and bus registration receipts in 1926, the motor truck constituted 11% of the total number of vehicles registered and paid nearly 25% of the registration receipts.

The figures are for the 33 states:

Vehicles	Registration	Per cent of total	Taxes	Per cent of total
Passenger cars and buses	15,782,484	89	133,485,837	75.5
Motor trucks	1,976,506	11	43,250,753	24.5
	17,758,990	100.0	176,736,590	100.0

This does not include gasoline taxes. It is self-evident that the motor trucks paid in even greater proportion of the gas tax because of their relatively greater consumption of gasoline.

Common Carrier Taxation.

The man who goes into the common carrier trucking business in most states must pay an added fee above the amount paid by the private truck.

In a study in 1925 of common carrier truck fees and taxes, in 25 states, Prof. Henry R. Trumbower, then with the U. S. Bureau of Public Roads, found that on a comparable basis, a three-ton truck owned by a common carrier would pay an average of $212.31 more than a similar vehicle operated by a private carrier. The average license fee for private carriers was $64.03, so that the total fees for the common carrier three-ton truck figured out at $276.34 while the private carrier paid $64.03.

Common Carrier Taxed Heavily in Texas.

At the Dallas hearing before the Interstate Commerce Commission, Don C. Saunders, President of the Texas Truck and Team Owners' Association, presented material as to the taxation of motor trucks in that state, saying in part:

". . . . At the present time the license fee of five-ton trucks or in excess thereof, is more than $1,150.00 per truck, which is about one-fourth of the actual cost of such equipment. This, of course, is absolutely prohibitive and the result is that today there are less than 500 trucks of a greater capacity than three and one-half tons operating in this state. The cost of transporting

merchandise in smaller trucks is much greater than if handled in larger equipment and this has naturally increased the cost of transportation to the public in this state and it has had the effect of curtailing operation in congested areas."

". . . . We were advised by the Highway Department of the State of Texas that it cost approximately four hundred dollars per mile to maintain the roads after they had been constructed. At that time we were operating some sixteen trucks over a distance of one hundred and twenty-five miles of paved highway and our license fees that we were paying of $6,000.00 was sufficient to pay over 10% of the entire cost of the upkeep of that road for a period of a year. In other words, we were paying about $6,000.00 license fees on sixteen trucks, and that amount, according to the data furnished by the Highway Department, paid more than 10% of the entire cost of maintenance, leaving the hundreds of thousands of other privately owned trucks and cars to pay the other 90%. If you would take the license fees of other truck owners operating over that same road the probabilities are that the owners of trucks would pay the entire cost of maintenance of that entire one hundred and twenty-five miles of road, leaving the public, who use the roads generally with private passenger cars, nothing to pay for the maintenance of that particular stretch of road. . . ."

Motor Taxes Approaching Current Highway Expenditures.

Special motor taxes in the form of registration fees and gasoline taxes amounted to nearly $500,000,000 in 1926, while taxes on the motor vehicle of all kinds came to $712,000,000.

The estimated highway expenditure for rural roads in the same year was $1,053,000,000, of which the states spent $621,000,000. Excluding the bonds issued by the state and the funds received from the Federal Government, the taxes derived from motor vehicles were approximately equal to the current state income for highway purposes.

This situation was forecast in a report on highway finance prepared by the National Tax Association in 1924, in which it stated:

"Since about 40% of the highway expenditures are met by borrowings, the time is rapidly approaching when special motor vehicle taxes will equal the expenditures on highways, both primary and local, from current tax receipts. . . ."

VIII. Influence on Other Carriers

Motor Transport is a Special Service.

That motor truck transportation renders a special service to the shipper is emphasized in the Connecticut highway transport report:

"The greater part of the tonnage transported by motor truck between the cities compared above (Connecticut) is moved in trucks owned and operated by the shipper of the commodity. Only a small part is transported by motor truck common carriers. The ownership of the vehicle of transportation by the shipper results in a type of service which cannot be rendered by other transportation agencies. It is usually a complete movement, and is adaptable to greater variations in degrees of service. These differences in service tend to reduce the amount of true competition between the two types of transportation."

Additional evidence of the same facts comes from the Cook County survey:

46 Railroads use trucks in terminal operations—
15 For store door delivery-
11 To replace local freight-trains.

". . . . Motor trucks are used in a large number of different forms of transportation service, by far the most important of which is the distribution of goods intended for immediate consumption. Of all loaded trucks recorded on Cook County highways 56.3% originated at retail establishments, wholesale establishments or consumers. A large part of the haulage classed as originating at consumers is made up of trucks delivering goods to a series of consumers. With few exceptions all trucks originating at retail establishments, wholesale establishments and consumers are engaged in the distribution of immediate consumption goods. Manufacturing companies also form an im-

portant type of origin; 17.9% of the total loaded trucks originated at such establishments. This movement is made up largely of the transportation of finished products to shipping points or selling establishments and the transportation of semi-finished products between manufacturing plants."

Chicago Shippers Make Little Change in Long Haul.

Data accumulated in the Cook County highway transport survey indicate that very little change has been made by shippers in the handling of long-haul freight. The report states:

". . . . Chicago shippers were asked to what extent during the past ten years they had substituted the highway truck for rail L. C. C. hauls in zones beyond a 15-mile radius of the location of their business. Reports indicate that 70% of the shippers had made no charge in haulage methods for distance beyond 15 miles; 4% of the shippers noted a small increase in the use of trucks beyond the 15-mile zone; 2% of the shippers now haul in trucks up to 20 miles; 2% up to 40 miles and 2% up to 50 miles. Seven per cent of the shippers report considerable change in the use of trucks beyond the 15-mile zone while 13% of the shippers haul all goods beyond 15 miles by truck.

"Shippers were asked whether the truck had been used to any appreciable extent as a substitute for rail carload in the zone beyond 15 miles. Eighty-two per cent reported no change beyond 15 miles; 5% transport all carload traffic over the highways up to 40 miles; 2% transport all carload traffic via highways up to 25 miles; 2% transport 90% of their carload traffic via highways; 2% transport some carload traffic via highways."

Truck Dominates Short Haul.

An analysis of all freight moved during a typical month at Columbus, Ohio, showed that trucks handled 84.5% of all tonnage moved within the 20-mile zone. This percentage decreased sharply as the distance increased, as shown by the table:

Length of haul (highway miles)	Motor truck		Rail C.L.		Rail L.C.L.		Total	
	Tons	Per cent	Tons	Per cent	Tons	Per cent	Tons	Per cent
Less than 20	6,091	84.5	1,112	15.4	10	0.1	7,213	100.0
20-39	5,973	54.7	4,803	44.0	145	1.3	10,921	100.0
40-59	2,299	32.0	4,484	62.4	404	5.6	7,187	100.0
60-99	980	24.2	2,409	59.4	663	16.4	4,052	100.0
100 or over	157	2.3	5,280	77.4	1,383	20.3	6,820	100.0

Based upon tonnage between Columbus and 30 cities having rail connections.

Comparison Truck and Rail Tonnage.

Data from the Connecticut survey comparing the amount of tonnage moving between certain points by rail and by truck further define the use of the truck in the short-haul field:

"Considerable data were collected as to the character and volume of freight transported by highway and railroad between selected points both within and outside of the state. The points selected represent distances varying from 17 to 140 miles, and all have direct connection by rail and highway.

Between New Haven and Bridgeport 75.2% of all the freight moves by motor truck, 0.9% as L.C.L. rail shipment, and 23.9% as carload rail shipment. The distance is 17 miles by rail and 18 miles by highway. Between New York City and Waterbury, a distance of 93 miles by highway and 88 miles by rail, the figures are 8.7% by motor truck, 17.5% L.C.L. freight, and 73.8% carload freight.

Trucking Small Package Movement.

"As motor truck freight is primarily a package, or small unit shipment, it is more strictly comparable with rail L.C.L. freight than with all rail freight. Of all package freight the motor truck carries over 90% between points less than 60 miles apart. Between points over 60 miles apart the percentage varied considerably, but the tendency toward relatively decreasing truck tonnage with the increase in distance is very apparent.

Truck Vital to Movement of Perishables.

"The importance of the motor truck in the transportation of products of agriculture and products of animals is even more apparent. These classifications include a large part of the movement of perishable foodstuffs. For products of animals the motor truck tonnage greatly exceeds the rail L.C.L. tonnage between all points analyzed except New York City and Springfield, a distance of approximately 134 miles, and exceeds the total rail tonnage between all points except New York City and Springfield, and New York City and New Haven. The large car-lot movement of these products between New York City and New Haven is largely accounted for by the fact that New Haven is the wholesale distribution market for a considerable area.

Rail Handles Bulk of Carload Tonnage.

"Of manufactures the motor truck tonnage exceeds the rail L.C.L. tonnage between all points analyzed except New York City and Springfield, and New York City and Waterbury; but the total rail tonnage exceeds that of the motor truck for all distances over 60 miles and also between Hartford and Springfield, a distance of approximately 25 miles. Between the latter points, however, 3,312 tons of the total of 3,627.8 tons, or over 90% of the carload tonnage of manufactures, consists of refined petroleum and its products."

IX. Legal Aspects of Interstate Regulation of the Motor Vehicle

Motor Transport Brings Questions of Regulation.

"Within the past five years the motor vehicle for hire has developed from insignificance to a formidable position in our transportation system . . ." says David E. Lielienthal and Irwin S. Rosenbaum, in a brief on motor carrier regulation by certificates of necessity and convenience, published in the Yale Law Journal, December, 1926.

" . . . With few exceptions comprehensive regulation of motor carriers begins with a grant of power to the existing public utility commission, either by a special act applicable alone to motor carriers, by a statute specifically placing the new kind of public utility under the general public utility act, or by construction of existing provisions to include them. Where commission regulation has been adopted, it has been coupled with the requirement that before motor carriers may begin operation they must obtain from the commission a certificate or permit, evidencing the commission's opinion that 'the public convenience and necessity' require such operation. This has been the legal device which the legislatures and their agents, the commissions, have employed in their efforts to control the economic situation produced by the rise of the motor carrier."

Supreme Court Decisions Clarify Situation.

It was the situation pointed out by Messrs. Lilienthal and Rosenbaum that have brought about six important decisions by the U. S. Supreme Court bearing on the question of interstate regulation of the motor vehicle.

Three decisions were handed down from the October, 1924, term and made public early in 1925. In Michigan Public Utilities Commission vs. Coral W. Duke, the court held that the state could not impose common carrier regulation upon a contract carrier or private carrier by legislative fiat.

The case of Frost vs. Railroad Commission of the State of California, decided at the October term, 1925, re-affirmed the decision of the court in the Duke case.

Limited State Regulation Upheld.

In Morris vs. Duby, decided at the October, 1926, term, the Supreme Court upheld the right of the State Highway Commission of Oregon to impose reasonable load limitations and stated that in the absence of national legislation especially covering the subject

of interstate commerce, the state may rightfully prescribe uniform regulation for their use (that of the highway) as may be wise to prevent injury and damage to them.

Again, in Clark vs. Poor, decided at the same term, the Court affirms the right of the state to regulate motor truck common carriers although engaged exclusively in the interest of safety and convenience and to insure the conservation of the highways.

The decision further affirms the right of the state to charge such common carriers an extra tax for their use of the highways over and above the tax which all vehicles pay for the use of the highways.

Extent of Intra-state Regulation.

Motor vehicle carriers for hire automatically fall within two classifications: First, those employed by their owners for the transportation of certain persons or the property of certain persons to places prescribed in individual agreements entered into for the purpose. This class is known as the Contract Carrier. The other class comprises those motor vehicles employed for the transportation of any or all persons or the property of any or all persons, indiscriminately, under general conditions of agreement applicable to the whole public. These vehicles are known as Common Carriers.

Since the dividing line between the contract carrier and the common carrier cannot clearly be defined, there are innumerable instances in which it has been possible for truck operators to escape common carrier classification by claiming to operate as contract haulers. Because of this situation grave difficulties have been experienced in enforcing common carrier regulatory laws affecting trucks in practically every state in which such laws have been passed.

In the regulation of the Contract Carrier the state has encountered considerable difficulty because of the individuality of each of these particular haulers, and the wide diversity of interest they serve. Any regulation which tends to place a Contract Carrier into the Common Carrier Class has been declared unconstitutional. Therefore, regulation of these carriers has been confined almost exclusively to the physical characteristics and physical operation of the vehicles themselves, through State Motor Vehicle Laws.

Common Carriers, besides having their physical characteristics and operations regulated, are being regulated also as to the business which they do.

Pennsylvania, in 1914, definitely segregated motor vehicles when used as common carriers and placed under the regulation of that State's Public Service Commission. Since then other states have followed suit until at present there are forty-four states regulating passenger carriers to a comparatively complete degree and thirty-three regulating property carriers to a greater or less degree, while in two other states, the Public Utilities Commissions hold that they have the necessary power to regulate motor vehicle common carriers, but have not, as yet, seen fit to exercise this power to any great extent.

In all but two instances of regulation, the authority of already existing state agencies (the Public Utilities Commission, the Railroad Commission or Public Service Commission) having control of other common carriers has been extended to include motor vehicle carriers. Kentucky has created the office of Commissioner of Motor Transportation, while in West Virginia, the State Road Commission exercises regulatory authority. These authorities are, in all cases, empowered to make rules and regulations controlling these carriers.

The most characteristic feature of the regulatory measures adopted is the almost universal employment of a Certificate of Public Convenience and Necessity granted or withheld after consideration, not only of the ability of the applicant to serve the public in the proposed operation, but also of the character and extent of service already furnished by existing carriers. The Commissions are further empowered to designate routes over which carriers may operate; to require liability insurance covering personal injury and property damage as a prerequisite to operation; to fix rates and schedules; to require the filing of periodical reports, timetables, schedules and other data and to supervise the financial accounts of the carriers.

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